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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/817,031

03/27/2001

Xiaoning Nie

P20721.P05

7309

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7590

07/19/2004

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EXAMINER

PHAN, TAM T

ART UNIT

PAPER NUMBER

2144

DATE MAILED: 07/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/817,031

Applicant(s)

NIE, XIAONING

Examiner

Tam (Jenny) Phan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04/24/2002.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-20 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 27 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This application has been examined. Claims 1-20 are presented for examination.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.
3. The effective filing date for the subject matter defined in the pending claims which has support in parent German Application No. 10016236.3 in this application is 03/31/2000. Any new subject matter defined in the claims not previously disclosed in parent 10016236.3, is entitled to the effective filing date of 03/27/2001.

Information Disclosure Statement

4. An initialed and dated copy of Applicant's IDS form 1449, Paper No. 4, is attached to the instant Office action.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Egbert (U.S. Patent Number 6,356,551) in view of Colby et al. (U.S. Patent Number 6,449,647), hereinafter referred to as Colby.
7. Egbert disclosed a server module for a modularly designed server comprising: at least one data processing unit for data processing data packets; at least one addressable

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communication interface for connecting the server module to an external network via which the data packets are transmitted; a switching interface for connecting the server module to a switching device of the modularly designed server; and having a routing calculation unit for calculating a server module address using a routing table (Figures 4, 7A-7B, column 3 lines 37-65, column 4 lines 31-62, column 5 lines 5-34, column 11 lines 36-54).

8. Egbert taught the invention substantially as claimed. However, Egbert did not expressly teach a routing table on the basis of the utilization level of the data processing units of all the server modules of the modularly designed server.

9. Egbert suggested exploration of art and/or provided a reason to modify the method with a routing table on the basis of the utilization level of the data processing units of all the server modules of the modularly designed server (Abstract, column 7 lines 42-57, column 8 lines 4-11).

10. Colby disclosed a routing table on the basis of the utilization level of the data processing units of all the server modules of the modularly designed server (Abstract, column 2 lines 54-64, column 6 line 46 – column 7 line 23, column 9 lines 36-65).

11. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the server module of Egbert with the teachings of Colby to include the routing table on the basis of the utilization level of the data processing units of all the server modules of the modularly designed server in order to directs the content request to a best-fit server (Colby, Abstract, column 2 lines 54-64) since a server may gracefully absorb a content request spike beyond the capacity of the server by directing content requests to other servers. This allows mirroring of critical content in distributed data centers, with overflow content delivery capacity and backup in case of a partial communications failure (Colby, column 3 lines 43-51).

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12. Regarding claim 2, Colby disclosed a server module wherein the server module is provided for data processing data packets of particular prescribed application types (column 1 lines 43-64, column 2 lines 5-13, column 6 lines 13-33, column 9 lines 5-24).

13. Regarding claim 3, Colby disclosed a server module wherein the server module address is calculated on the basis of the application type of the transmitted data packet (column 1 lines 43-64, column 2 lines 5-13, column 6 lines 13-33, column 9 lines 5-24).

14. Regarding claim 4, Egbert disclosed a server module wherein the communication interface has buffer stores for temporarily storing transmitted data packets (column 4 lines 44-50, column 5 lines 19-34, lines 53-65).

15. Regarding claim 5, Egbert and Colby disclosed a server module wherein the routing table is constantly updated in an associated routing server module of the modularly designed server (Egbert, column 16 lines 17-59; Colby, column 7 lines 1-23, column 8 lines 20-35).

16. Regarding claim 6, Egbert and Colby disclosed a server module wherein the routing server module transmits the current routing table to the server modules via the switching interface (Egbert, column 16 lines 17-59; Colby, column 7 lines 1-23, column 8 lines 20-35).

17. Regarding claim 7, Colby disclosed a server module wherein the routing server module collects and evaluates data relating to the utilization level of the data processing units of all server modules of the modularly designed server (column 2 lines 14-27, column 5 lines 28-47, column 6 line 44 – column 7 line 23, column 8 lines 21-35, column 9 lines 36-65, column 14 lines 13-28).

18. Regarding claim 8, Colby disclosed a server module wherein the routing server module updates the routing table on the basis of the evaluated utilization level data, the assigned application types of the other server modules and also priority information data for the

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transmitted data packets (column 2 lines 14-27, column 3 lines 1-9, column 6 line 44 – column 7 line 23, column 8 lines 21-35, column 9 lines 36-65).

19. Regarding claim 9, Colby disclosed a server module wherein the utilization level of the data processing unit of the server module is too high, data processing processes executed within the server module are transmitted to data processing units of other server modules (column 3 lines 42-58, column 9 lines 5-24, column 14 lines 14-27).

20. Regarding claim 10, Colby disclosed a server module wherein the server module address is calculated on the basis of the application type of the transmitted data packet (column 1 lines 43-64, column 2 lines 5-13, column 6 lines 13-33, column 9 lines 5-24).

21. Regarding claim 11, Egbert disclosed a server module wherein the communication interface has buffer stores for temporarily storing transmitted data packets (column 4 lines 44-50, column 5 lines 19-34, lines 53-65).

22. Regarding claim 12, Egbert disclosed a server module wherein the communication interface has buffer stores for temporarily storing transmitted data packets (column 4 lines 44-50, column 5 lines 19-34, lines 53-65).

23. Regarding claim 13, Egbert and Colby disclosed a server module wherein the routing table is constantly updated in an associated routing server module of the modularly designed server (Egbert, column 16 lines 17-59; Colby, column 7 lines 1-23, column 8 lines 20-35).

24. Regarding claim 14, Egbert and Colby disclosed a server module wherein the routing table is constantly updated in an associated routing server module of the modularly designed server (Egbert, column 16 lines 17-59; Colby, column 7 lines 1-23, column 8 lines 20-35).

25. Regarding claim 15, Egbert and Colby disclosed a server module wherein the routing table is constantly updated in an associated routing server module of the modularly designed server (Egbert, column 16 lines 17-59; Colby, column 7 lines 1-23, column 8 lines 20-35).

26. Regarding claim 16, Egbert and Colby disclosed a server module wherein the routing server module transmits the current routing table to the server modules via the switching interface (Egbert, column 16 lines 17-59; Colby, column 7 lines 1-23, column 8 lines 20-35).

27. Regarding claim 17, Egbert and Colby disclosed a server module wherein the routing server module transmits the current routing table to the server modules via the switching interface (Egbert, column 16 lines 17-59; Colby, column 7 lines 1-23, column 8 lines 20-35).

28. Regarding claim 18, Colby disclosed a server module wherein the routing server module collects and evaluates data relating to the utilization level of the data processing units of all server modules of the modularly designed server (column 2 lines 14-27, column 5 lines 28-47, column 6 line 44 – column 7 line 23, column 8 lines 21-35, column 9 lines 36-65, column 14 lines 13-28).

29. Regarding claim 19, Colby disclosed a server module wherein the routing server module updates the routing table on the basis of the evaluated utilization level data, the assigned application types of the other server modules and also priority information data for the transmitted data packets (column 2 lines 14-27, column 3 lines 1-9, column 6 line 44 – column 7 line 23, column 8 lines 21-35, column 9 lines 36-65).

30. Regarding claim 20, Colby disclosed a server module wherein the utilization level of the data processing unit of the server module is too high, data processing processes executed within the server module are transmitted to data processing units of other server modules (column 3 lines 42-58, column 9 lines 5-24, column 14 lines 14-27).

31. Since all the limitations of the claimed invention were disclosed by the combination of Egbert and Colby, claims 1-20 are rejected.

Conclusion

32. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Muller et al. (U.S. Patent Number 6,246,680) disclosed an architecture for a highly integrated network element building block includes a network interface with multiple ports for transmitting and receiving packets over a network. The network device building block also includes a packet buffer storage which is coupled to the network interface. The packet buffer storage acts as an elasticity buffer for adapting between incoming and outgoing bandwidth requirements. A shared memory manager may also be provided dynamically allocate and deallocate buffers in the packet buffer storage on behalf of the network interface and other clients of the packet buffer storage. The network device building block further includes a switch fabric which is coupled to the network interface. The switch fabric provides forwarding decisions for received packets. A given forwarding decision includes a list of ports upon which a particular received packet is to be forwarded. The CPU interface is coupled to the switch fabric and is configured to forward packets received from the CPU based upon forwarding decisions provided by the switch fabric.
- b. Maher, III et al. (U.S. Patent Number 6,654,373) disclosed a content aware network device is described that is able to scan the contents of entire data packets including header and payload information. The network device includes a physical interface for converting analog network signal into bit streams and vice versa. The header

processor scans the header information from each data packet, which is used to determine routing information and session identification. The payload analyzer scans the data packet's payload and matches the payload against a database of known strings. The payload analyzer is able to scan across packet boundaries and to scan for strings of variable and arbitrary length. Once the payload has been scanned the network device can operate on the data packet based on the results of the payload analyzer. The scanned data packets and the associated conclusions are then passed to a quality of service processor to performs traffic management and traffic shaping on the flow of data packets based on contents of the data packets.

c. Hu (U.S. Patent Number 6,757,291) disclosed a networked system that improves the end-to-end performance of network access by achieving higher throughput between the network and storage system, improving reliability of the system, yet retaining the security, flexibility, and services that a server-based system provides. The apparatus that provides this improvement consists of a network interface, server computer interface, and storage interface. It also has a switching element and a high-layer protocol decoding and control unit. Incoming traffic (either from the network or storage system) is decoded and compared against a routing table. If there is a matching entry, it will be routed, according to the information to the network, the storage interface, or sent to the server for further processing (default). The routing table entries are set up by the server based on the nature of the applications when an application or user request initially comes in. There may also be a speed matching function between the network and storage, load balancing function for servers, and flow control for priority and QoS purposes.

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33. Refer to the enclosed PTO-892 for details and complete listing of other pertinent prior art of record.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tam (Jenny) Phan whose telephone number is (703) 305-4665.

The examiner can normally be reached on M-F 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Cuchlinski can be reached on 703-308-3873. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

tp
July 9, 2004

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